

**Notice of Allowability**

Application No.

09/971,054

Examiner

Kelly L. Jerabek

Applicant(s)

TAMAGAWA, TOSHIMITSU

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed 3/29/2006.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/29/2006 has been entered.

### *Election/Restrictions*

Claim 2 is allowable. Claims 4-5 previously withdrawn from consideration as a result of a restriction requirement, require all the limitations of an allowable claim. Pursuant to the procedures set forth in MPEP § 821.04(a), **the restriction requirement between species 1-4, as set forth in the Office action mailed on 3/24/2005, is hereby withdrawn** and claims 4-5 hereby rejoined and fully examined for patentability under 37 CFR 1.104. In view of the withdrawal of the restriction requirement, applicant(s) are advised that if any claim(s) including all the limitations of an allowable claim is presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the

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provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

***Allowable Subject Matter***

**Claims 1-7 are allowed.**

The following is an examiner's statement of reasons for allowance:

Re claim 1, the prior art of record fails to teach or suggest " An image reading device having a plurality of photoelectric conversion elements formed in one or more rows on an IC chip and a metal conductor layer having openings formed therein for limiting light striking the photoelectric conversion elements, wherein the metal conductor layer is formed around the openings individually so as to prevent light from striking the photoelectric conversion elements except through the openings and **electrically connected to one terminal of the plurality of photoelectric conversion elements**, and wherein a metal conductor having substantially a same width as the metal conductor layer is formed integrally with the metal conductor layer in an area extending from a photoelectric conversion element located at an end of the row to an edge of the IC chip, **and wherein a semiconductor substrate on which the photoelectric**

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**conversion elements are formed, the metal conductor layer, and the metal conductor are maintained at the same potential".**

Re claim 2, the prior art of record fails to teach or suggest " An image reading device comprising an IC chip, the IC chip comprising: a plurality of photoelectric conversion elements arranged at predetermined intervals in one or more rows on the IC chip and having an opening each; a first metal conductor layer formed around the openings individually to prevent light from striking the photoelectric conversion elements except through the openings **and electrically connected to one terminal of the plurality of photoelectric conversion elements**; and a second metal conductor layer having substantially a same width as the first metal conductor layer and formed between an edge of the IC chip and the first metal conductor layer in an area extending from a photoelectric conversion element located at an end of the row to the edge of the IC chip so as to shut off light coming obliquely from above in a direction of the edge of the IC chip, and **wherein a semiconductor substrate on which the photoelectric conversion elements are formed, the first metal conductor layer, and the second metal conductor layer are maintained at a same potential"**.

Re claim 6, the prior art does not teach or fairly suggest "An image reading device comprising an IC chip, the IC chip comprising: a semiconductor substrate in which elements are formed; a plurality of photoelectric conversion elements arranged at predetermined intervals in one or more rows on the semiconductor substrate; an

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insulating layer formed over substantially an entire surface of the IC chip on and around the photoelectric conversion elements; a first metal conductor layer formed on a surface of the insulating layer with openings formed above the photoelectric conversion elements and in such a way as to surround the openings, the first metal conductor layer serving to prevent light from striking the photoelectric conversion elements except through the openings; a second metal conductor layer having substantially a same width as the first metal conductor layer and formed between an edge of the IC chip and the first metal conductor layer in an area extending from a photoelectric conversion elements located at an end of the row to the edge of the IC chip so as to shut off light coming obliquely from above in a direction of the edge of the IC chip; **and a plurality of contact holes formed at predetermined intervals in at least one row in the insulating layer so as to surround each of the openings individually along every side thereof, the contact holes serving to connect the first metal conductor layer to the semiconductor substrate and simultaneously preventing light from striking the photoelectric conversion elements through openings rather than the openings formed right above the respective photoelectric conversion elements".**

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Contacts***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on **(571) 272-7593**. The fax phone number for submitting all Official communications is **(703) 872-9306**. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



DAVID OMETZ  
SUPERVISORY PATENT EXAMINER